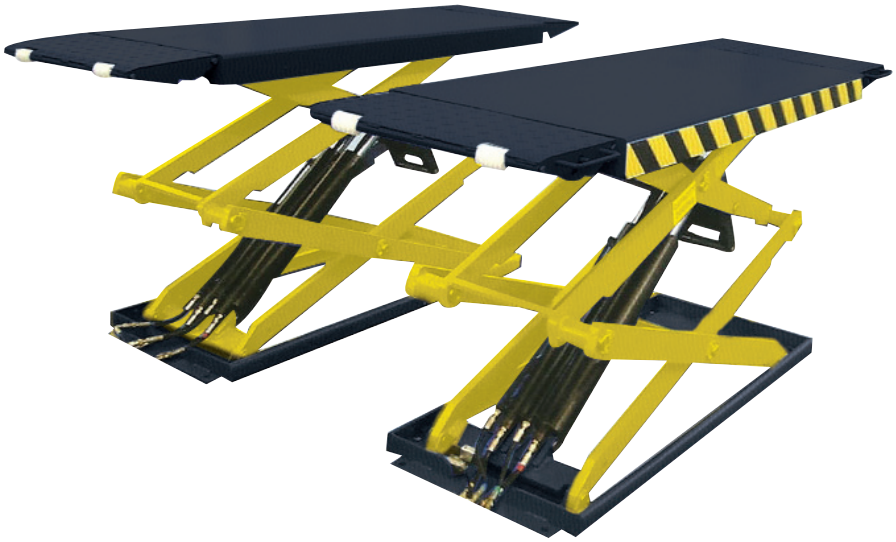
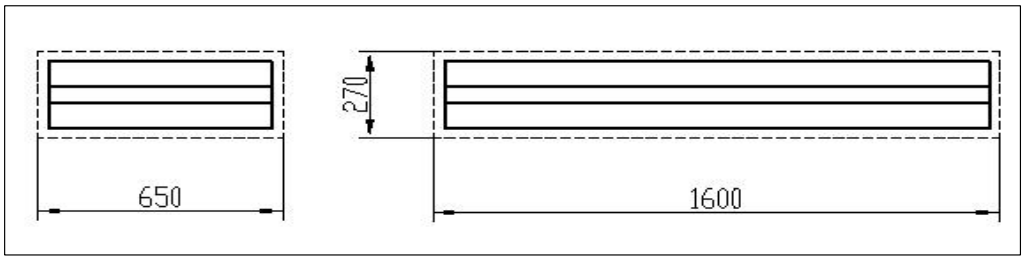
# OWNER'S TECHNICAL MANUAL

## 3.0t Full-Rise Scissor Lift

**E1030SLN**



### Packing:

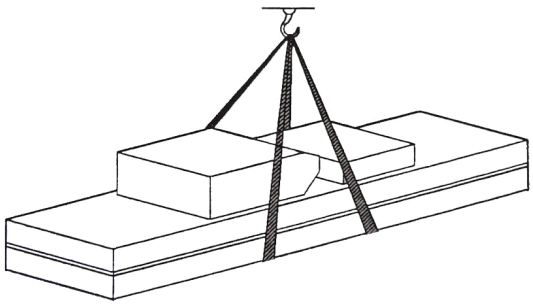



### Transport:

**WARNING:** Packing can be lifted or moved by lift trucks, cranes or bridge cranes. In case of slinging, a second person must always take care of the load, in order to avoid dangerous oscillations.

During loading and unloading operation, goods must be handled by vehicles or ships.

- At the arrival of the goods, verify that all items specified in the delivery notes are included.
- If finding missing parts, possible defects or damage due to transport, one should examine damaged cartons according to "Packing List" to verify the condition of damaged goods and missing parts, also the person in charge or the carrier must be immediately informed.
- The machine is heavy goods! Don't take manpower load and unload and transporting way into consideration, the safety of working is important.
- Furthermore, during loading and unloading operation goods must be handled as shown in the picture.

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## Storage:

1. The machine equipment should be stocked in the warehouse, if stocked outside should do the disposal well of waterproof.
2. Use box truck in the process of transport, use container storage when shipping.
3. The control box should be placed perpendicularly during the transport; and prevent other goods from extrusion.
4. The temperature for machine storage: -25ºC-55ºC.

This manual has been prepared for workshop personnel expert in the use of the lift operator and technicians responsible for routine maintenance fitter.

**WARNING:** Workers should read the “Maintenance & User Manual” carefully before carrying out any operation with the lift. This manual contains important information regarding:

- The personal safety of operators and maintenance workers.
- Lift safety.
- The safety of lifted vehicles.

## Conserving The Manual

This manual is an integral part of the lift.

The manual must be kept in the vicinity of the lift, so that the operator and maintenance staff must be able to locate and consult the manual quickly and at any time.

Attentively reading safety warning is particularly recommended.

**The lift is designed and manufactured according to European Standard**

**WARNING:** The lifting, transport, unpacking, assembly, installation, starting up, initial adjustment and testing, extraordinary maintenance, repair, overhauls, transport and dismantling of the lift must be performed by specialised personnel from the licensed dealer authorised by the manufacturer.

The manufacturer declines all responsibility for injury to persons or damage to vehicles or objects when any of the above mentioned operations has been performed by unauthorised personnel or when the rack has been subject to improper use.

This manual indicates the operative and safety aspects that may prove useful to the operator and maintenance worker. For better understanding the structure and operation of the lift and for best use of the same, workers must read the “Maintenance & Use Manual” carefully before carrying out it.

In order to understand the terminology used in this manual, the maintenance and repair activities, the ability to interpret correctly the drawings and descriptions contained in the manual and be the country in which the machine has been installed.

The same applies to the maintenance and the maintenance fitter must also possess specific and specialised knowledge both in mechanical and engineering field.

- OPERATOR: person authorised to use the lift
- MAINTENANCE FITTER: person authorised for routine maintenance of the lift.

Manufacturer owns the right to make little change for the manual owing to the improvement of technology.

## Description

**Machine Application:**

This lift can lift each kind of vehicle whose weight is less than 3000kg, and is suitable for use in vehicle tests, maintenance, and caring for automobiles, which is particularly suitable for use in the basement or on the floor, without construction and hole.

**Structure Features:**

- Use hidden and thin scissor structure, dispense with construction and ground hole, the occupation is small.
- Independent control box, low-voltage controlling, good security.
- Hydraulic cubage and in-phase cylinder, the synchronization of platform.
- Own the safety equipment of hydraulic lock.
- Own protection of safety valve and burst-proof equipment for hydraulic failure and over loading. So when the oil pipe bursts, the machine will not fall quickly.
- Own manual lowering operation when the power is cut, and the manual pump is prepared by the user.

**Equipment:**

- Machine basement (The position and space of equipment installation).
- Machine frame (The main structure of lift and insurance institution).
- Control box (Machine-controlled part).

**Basic structure**

The machine basement is made of cement and concrete.

**Frame**

Make of steel connecting rod, main lifting platform, sliding board, and hydraulic oil tank.

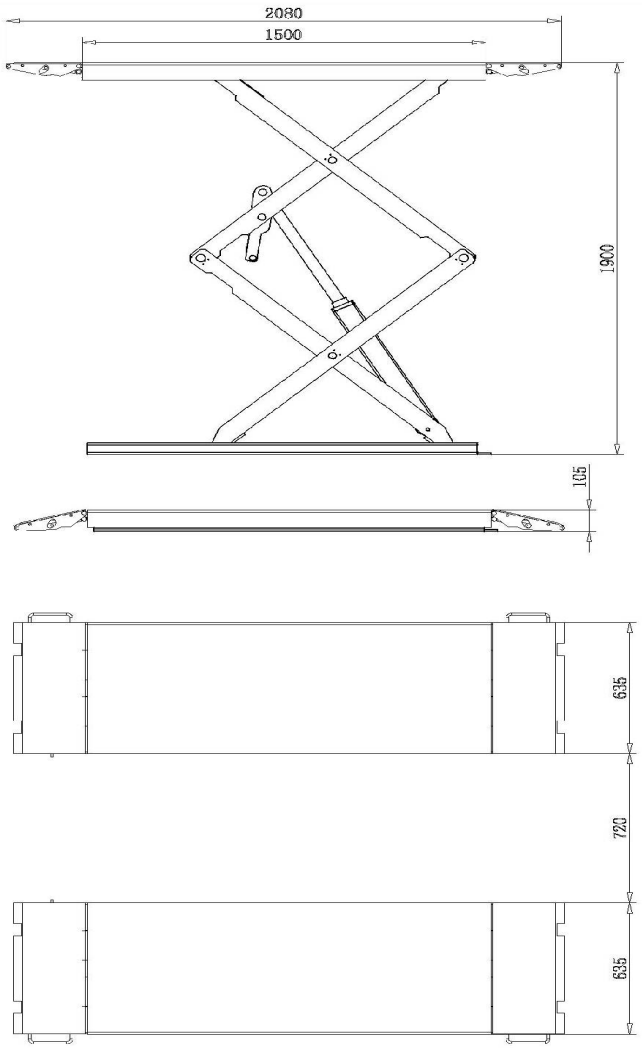
**Control box**

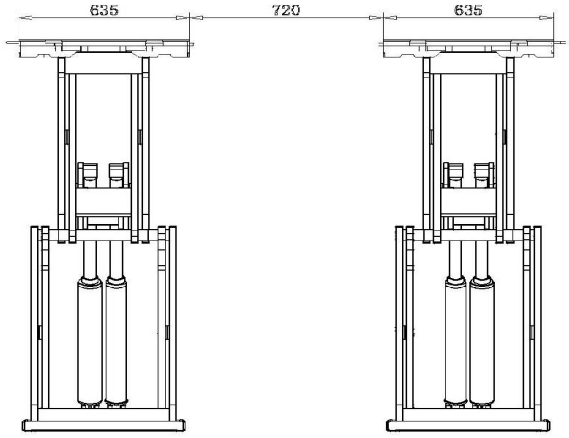
Under the control box is hydraulic oil tank and hydraulic pump, valve and other control system. On the control box is electrical system.

**WARNING:** Scissor lift is designed and built to lift all kinds of vehicles, all other use are unauthorised. In particular, the lift is not suitable for washing spray work. And not lift the vehicle whose weight exceeds the maximum weight.

## Specifications

| | |
|---|---|
| Drive | Electrical hydraulic |
| Lifting weight & height | 3000kg, 1900mm |
| Platform size | 105mm (H) x 1500mm (L) x 635mm (W) |
| Lifting time | ≤50s |
| Descent time | ≤60s |
| Whole machine size | 2080mm (L) x 1990mm (W) |
| Weight | 850kg |
| Voltage | AC 400V or 230V ± 5% 50Hz (or 60Hz–special ordered) |
| Motor power | 2.2kW |
| Hydraulic oil | 18L corresponds to wearable hydraulic oil |
| Working temperature | 5-40°C |
| Working humidity | 30-95% |
| Noisy level | <76db |
| Installation height | Height above sea level ≤1000M |
| Storage temperature | -25°C to 55°C |




**Motor:**

| | |
|---|---|
| Type | Y90L |
| Power | 2.2kW |
| Voltage | AC 400 or 230V ±5% |
| Current | 400V 5A or 230V 10A |
| Frequency | 50Hz (or 60Hz–special ordered) |
| Poles | 4 |
| Speed | 1450 r/min |
| Building shape | B14 |
| Insulation class | F |

**Pump:**

| | |
|---|---|
| Type | gear pump |
| Model | P4.3 |
| Flux | 4.3cc/r |
| Joint type | direct joint |
| Overflow valve setting pressure | 220 bar |
| Adjustable working pressure | 150-300 bar |

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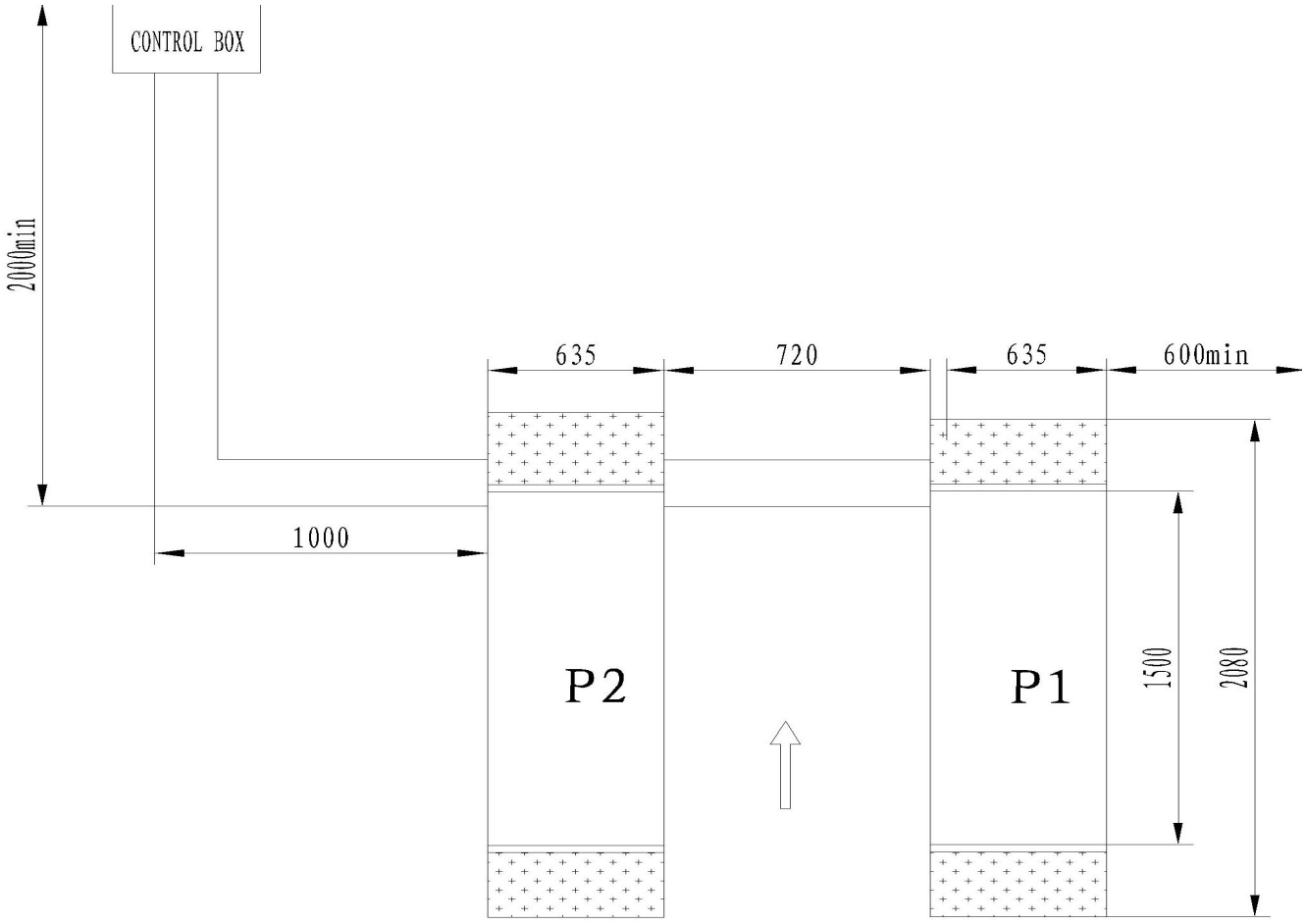
**Supply at the same time:**

Connect to the power supply of control box (400V or 230V)

**Requirements:**

- Concrete type 425#, the period of desiccation is 15 days
- Clean the basic layer, thickness of concrete ≥150mm, the leveling of whole length ≤5mm




REMARKS:

1. THE ALLOWED LEVEL ERROR SHOULD ⩽ 5mm
2. THICKNEES OF GROUNDWORK CONCRETE IS δ 150mm.
3. FIX GROUND BOLT BEFORE LOADING;
4. CONTROL BOX CAN BE PLACED ON THE LEFT SIDE OR RIGHT SIDE.

**WARNING:** The foundation of the end of the lift platform P1, P2 is the structure of concrete. When the thickness of inside level ground is less than 150mm, the end of P1, P2 should be irrigated the acreage: 2500×2500mm and thickness of concrete ≥150mm.

The basic thickness of concrete and leveling are keys, shouldn't egregiously expect the ability of level adjustment of machine itself.

TYPES OF VEHICLES SUITABLE FOR:

THE LOWER PARTS OF THE VEHICLES UNDERBODY COULD INTERFERE WITH STRUCTURAL PARTS OF THE LIFT, TAKE PARTICULAR PARTS OF THE SPORTS-CAR.

The lift will also handle customized or non-standard vehicles provided they are within the maximum specified carrying capacity.

Also the personnel safety zone must be defined in relation to vehicle with unusual dimensions.

## Safety

Read this chapter carefully and completely since important information for the safety of the operator or others in case of improper use of the lift is included.

In the following text there are clear explanations regarding certain situations of risk or danger that may arise during the operation or maintenance of the lift, the safety device installed and the correct use of such systems, residual risks and operative procedures to use (general specific precautions to eliminate potential hazards).

**WARNING:** Lifts are designed and built to lift vehicles and hold them in the elevated position in an enclosed workshop. All other uses of the lifts are unauthorised. In particular, the lifts are not suitable for:

- Washing spray work.
- Creating raised platforms for personnel or lifting personnel.
- Use as a press for crushing purposes.
- Use as elevator.
- Use as a lift jack for lifting vehicle bodies or changing wheels.

The manufacturer is not liable for any injury to persons or damage to vehicles and other property caused by the incorrect and unauthorised use of the lifts.

During lifting and descent, the operator must remain in the control station. The presence of persons inside the danger zone indicated is strictly prohibited. During operations persons are admitted to the area beneath the vehicle only when the vehicle is already in the elevated position, when the platforms are stationary, and when the mechanical safety devices are firmly engaged.

DO NOT USE THE LIFT WITHOUT PROTECTION DEVICES OR WITH THE PROTECTION DEVICES INHIBITED.

FAILURE TO COMPLY WITH THESE REGULATIONS CAN CAUSE SERIOUS INJURY TO PERSONS, AND IRREPARABLE DAMAGE TO THE LIFT AND THE VEHICLE BEING LIFTED.

### GENERAL PRECAUTIONS

**WARNING:** The operator and the maintenance fitter are required to observe the prescriptions of safety regulation in force in the country of installation of the lift.

Furthermore, the operator and maintenance fitter must:

- Always work in the stations specified and illustrated in this manual;
- Never remove or deactivate the guards and mechanical, electrical, or other types of safety devices;
- Read the safety notices placed on the machine and the safety information in this manual.

In the manual all safety notices are shown as follows:

**WARNING:** indicates following operations that are unsafe and can cause minor injury to persons and damage the lift, the vehicle or other property.

**CAUTION:** indicates possible danger that can result in serious injury to people and damage property.

### RISK OF ELECTRIC SHOCK:

A specific safety notice placed on the lift in areas where the risk of electric shock is particularly high.

### RISK AND PROTECTION DEVICES

We shall now examine the risks that operators or maintenance fitters may be exposed to when the vehicle is standing on the platforms in the raised position, together with the various safety and protection devices adopted by the manufacturer to reduce all such hazards to the minimum.

For optimal personal safety and safety of vehicles, observe the following regulations:

- Do not enter the danger areas when vehicles are being lifted.
- Make sure the vehicle is positioned correctly.
- Be sure to lift only approved vehicles, never exceed the specified carrying capacity, maximum height, and projection (vehicle length and width).
- Make sure that there is no person on the platforms during up and down movements and during standing.

## GENERAL RISKS FOR LIFTING OR DESCENT

The following safety equipments are used to protect over loading or the possibility of engine failure.

- In the condition of over loading, the overflow valve will open and directly return oil to the oil tank. (Fig. A)
- Each bottom of oil cylinder is equipped with antiknock valve. When the oil pipe is burst in the circuit of hydraulic pressure, the relevant antiknock valve will work and limit the lowering speed of platforms. (Fig. B)
- When the oil pipe gets bust or there's some obstacle to stop one of the platforms from lifting or lowering, another platform will stop at the same time due to the device. (Fig. C)

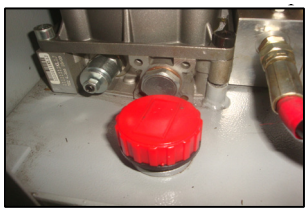


Fig. A

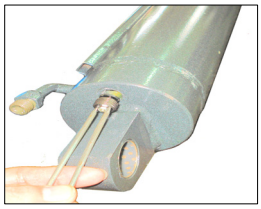


Fig. B

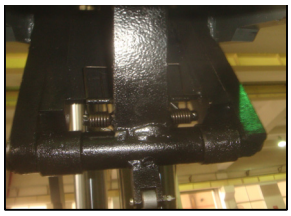


Fig. C

## RISKS FOR PERSONNEL

This heading illustrates potential risks for the operator, maintenance fitter, or any other person present in the area around the lift, result from incorrect use of the lift.

## RISKS FOR EXTRUSION

During up and down operations, personnel leave the said area without following the rule and instruction.

During up and down operations, no person is admitted to work beneath the movable parts of the lift, should work in the safe zone.

## RISK OF IMPACT (Fig. D)

Before the operator begins up and down movements, make sure that there are no personnel inside the danger zone. When, due to operational reasons, the lift is stopped at relatively low elevations (lower than 1.75m above the ground) personnel must be careful to avoid impact with parts of the machine not marked with special colors.

## RISK OF FALLING OFF (PERSONNEL)

During up and down operations, personnel are prohibited from entering the platforms and the vehicle to avoid falling off.

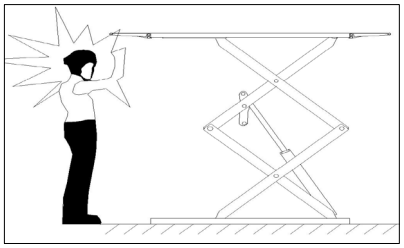
## RISK OF FALLING (VEHICLE) (Fig. E)

This hazard may arise in the case of incorrect positioning of the vehicle on the platforms, overweight of the vehicle, or in the case of vehicles of dimensions that are not compatible with the capacity of the lift.

When the platform is being tested, the vehicle engine can not be turned on.

There is nothing should be placed on the lift-lowering area and the movable parts of the lift.

Fig. D



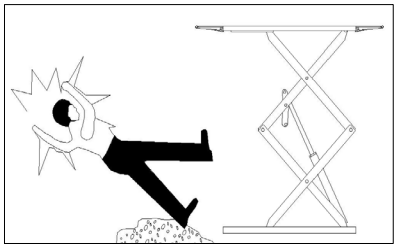


Fig. E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**RISK OF SLIPPING**

The floor caused by lubricant contamination of around the lift. The area beneath and immediately surrounding the lift and also the platforms must be kept clean. Remove any oil spills immediately.

**RISK OF ELECTRIC SHOCK**

- Risk of electric shock of the areas of insulated in electric equipments were shattered.
- Do not use jets of water, steam solvents or paint next to the lift, and take special care to keep such substances clear of the electrical control panel.

**RISKS RELATED TO INAPPROPRIATE LIGHTING**

- The operator and the maintenance fitter must be able to assure that all the areas of the lift are properly and uniformly illuminate compliance with the laws in force in the place of installation.
- During up and down operations, the operator should continually observe the lift and can operate it only in the position of operator.
- When lifting and lowering the vehicle, the cushion needs being put in the bottom of chassis.
- The handling of safety devices is strictly forbidden. Never exceed the maximum carrying capacity of the lift, make sure the vehicles to be lifted have no load.
- It is therefore essential to adhere scrupulously to all regulations regarding use, maintenance and safety contained in this manual.

## Installation

**WARNING:** Skilled and authorised personnel only should be allowed to perform these operations. Follow all instructions shown below carefully, in order to prevent possible damage to the car lift or risk of injury to people.

Skilled technicians only appointed by the same manufacturer or by authorised dealers, are allowed to install the car lift.

**Installation Requirements:**

1. The car lift must be installed according to the specified safety distances from walls, pole and what other equipments stated. (Fig. F)
2. The specified safety distances from walls must be 1000 mm at least, taking into consideration the necessary space to work easily. Because space for the control site and for possible runways in case of emergency is also necessary.
3. The room must be previously arranged for the power supply and pneumatic feed of the car lift.
4. The room must be 4000 mm in height, at least.
5. The car lift can be placed on any floor, as long as it is perfectly level and sufficiently resistant. (≥250 kg/cm², the thickness of concrete ≥ 150 mm)

All parts of the machine must be uniformly lit with sufficient light to make sure that the adjustment and maintenance operations can be performed safely, and without reflected light, glare that could give rise to eye fatigue.

- The integrality of arrived goods should be checked before the lift is installed.
- Moving and installing lift should follow the process as the picture instructs.

The transport and storage of machine refers to “TRANSPORT AND STORAGE” on page 1.

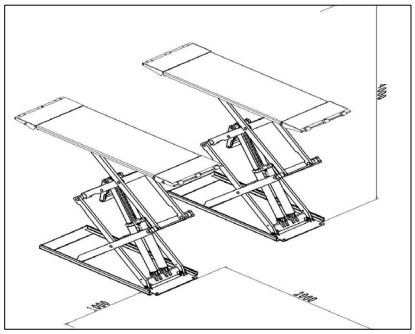


Fig. F

**Platform Installation:**

- Place two platforms on the position of the location.
- The bottom of oil cylinder is located in the frontage of machine (the direction of getting on the vehicle)
- Use fork car or other lifting equipments to lift the platform (Fig. G) and make sure that the safety equipment of machine is both turned on and locked.

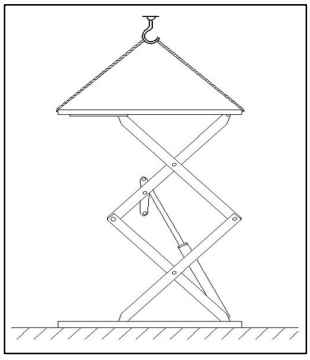


Fig. G

**WARNING:** To avoid failure of machine safety equipment, can insert a wood in the middle part of joint-pole.

Prohibit working beneath the lift when hydraulic system is not completely equipped with hydraulic oil and take the action of up and down operations.

When moving the lift platform, adjust the space between two platforms; make sure that the two platforms are parallel.

**Line Connection:**

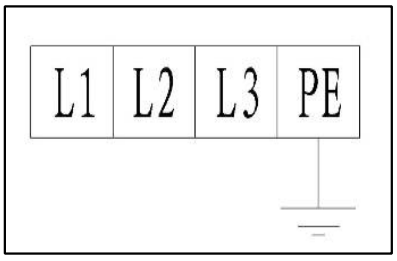
**WARNING:** Connect the electrical and oil line according to the “electrical diagram” and “oil pipe connection diagram”. In the process of connecting oil pipes, pay particularly attention to the protection of pipe tie-in to prevent abnormal thing from entering oil loop, then damaging hydraulic system.

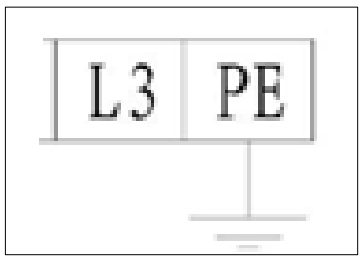
**Electric Circuit Connection:**

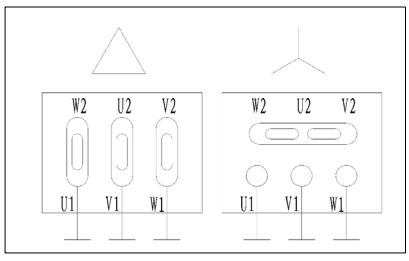
Follow the stated line-pathway and line-number of the “electrical diagram” to connect electric circuit.

Only skilled person is allowed to perform the operations.

- Open the control box front cover.
- **Connection of power supply:**
  The 400V three-phase and five-line connection wires (3×2.5 $mm^2$ + 2×1.5 $mm^2$ cable wire) for power supply are connected to control box L1, L2, L3, N and entering-wire terminal. The PE ground wire is connected under the bolt marked ground firstly and then connected under the bolt marked ground of two platforms.
- If the lift is operated at 230V three-phase, please connect according to relevant drawing.

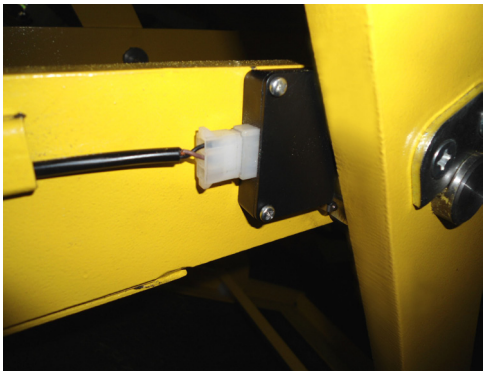


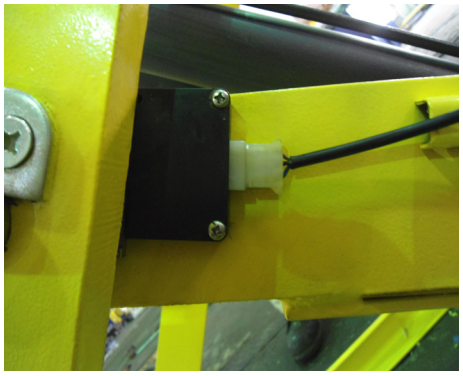




- **Connection of up limit switch:**
  Up limit switch is labeled 100# and 102#, to connect them to the same no. in the control box.

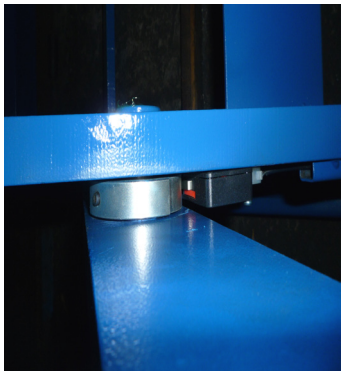
- **Connection of lower limit switch:**
  Lower limit switch is labeled 105#, 107# and 109#, to connect them to the same no. inside the control box.



Up limit switch



Lower limit switch



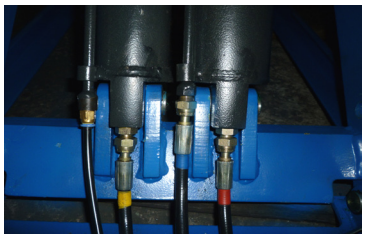
Position to fix the limit switch

**Oil Pipe Connection:**

Follow “oil pipe connection diagram“ to connect the oil pipes.

Only skilled and authorised person is allowed to perform the operations. And pay particularly attention to the protection of oil pipe fitting. Refer to “oil pipe diagram”:

- When connecting oil pipes, pay attention to the protection of oil pipe tie-in to prevent impurities from entering hydraulic circuit.
- When connect the oil pipes, be careful not to mistake each oil pipe number.
- During the standard installation, control box is in the nearside of vehicle-entering direction. If placed on the right should adjust relevant oil pipe.



## Adjustment

**WARNING:** Add oil and check the order of phase.

After installing lift and connecting hydraulic circuit and electric circuit, operate it as following:

- Open the hydraulic oil tank, add 18L of hydraulic oil into the oil tank, the hydraulic oil is provided by the user.

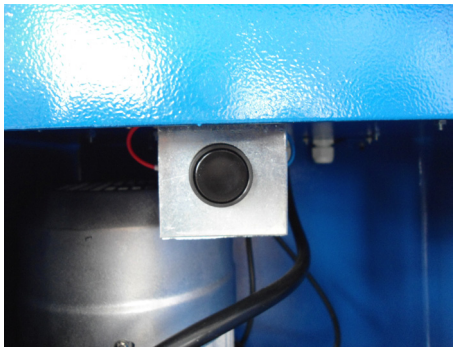
Make sure the clean of hydraulic oil, to prevent any impurity into the oil line, lead the digest of the oil line and no working of the solenoid valve.

- Turn on “MAIN SWITCH” to turn on power, clicking the “UP” button, check whether the motor turns clockwise (looking downward), if not turn off “MAIN SWITCH”, then to change the phase of the motor.

**WARNING:**
When turn on power, there will be high voltage existing in the control box, only authorised person can operate it.

**Oil make-up adjustment:**

1. Press “UP” button, and then motor starts to lift two platforms to go up to the apex.
2. Open the control box of door, and press “UP” button and “SB4” for some minutes.
3. Press “DOWN” button to let the two platforms go down until the platforms stop at the lower limit switch action position, and then press “ SECOND DOWN” button, and the platforms will go down to the lowest position.
4. The oil make-up adjustment process is over.

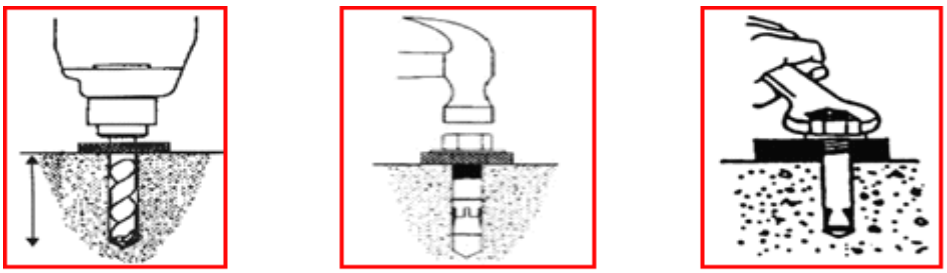


Adjust level button (SB4)

**Ground Bolts Installation:**

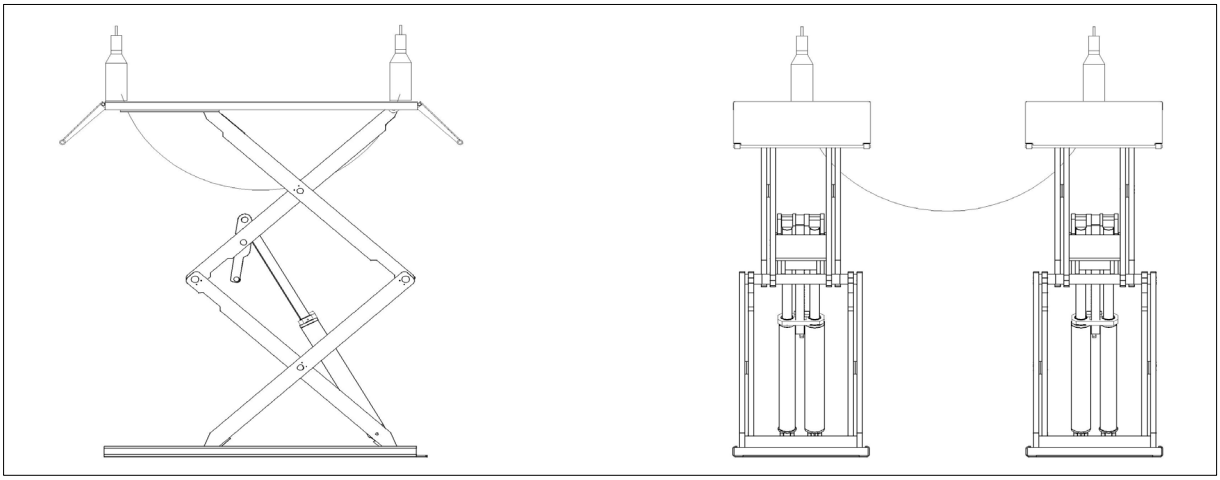
The ground bolts installation must start after the expiry date on the maintenance of concert, otherwise, it will affect the quality of solidity.

- Adjust the parallel of the platform and the distance of two platforms as required (page 5).
- Fix the anchor bolts with a percussion electric drill (percussion drill bit is of 16), drill to 120mm hole and clean the hole.
- Use light hammer to install the ground Holts into the hole (need not install the Central expanded nail of ground bolts, install it after level adjustment.)



**Level adjustment:**

- By using a level bar and the horizontal pipe and adjusting the adjustment screws at tow sides of the base plate.
- If platform unevenness is resulted from basic unevenness, use iron block to fill up the low place.
- After level adjustment, insert the central expanded nail of ground bolts and use heavy hammer to hammer it.
- Screw down the ground bolts cap.



When the expiry date on the maintenance of concrete hasn't arrived, one can not install the central expanded nail of ground bolts.

The gap between the base plate and ground after adjustment must be filled with iron plate or concrete.

**WARNING:** No loading of main machine test:

- Turn on the power QS of "MAIN SWITCH".
- Press "UP" button, pay attention to the synchronization and placidity of the lifting.
- Check and ensure there are no leakage on the oil line.

When testing the lift, no person or other things are allowed to stand or be put near the two sides and beneath the machine. If any abnormal is found, press button "EMERGENCY STOP" to stop it immediately. After clearing obstacles, do the test again.

**Load of machine test:**

- Drive the vehicle whose weight doesn't exceed maximum lift weight to the platform, and then the driver leave it.
- Put the lift rubber cushion on the the platform.
- Press "UP" button, lift the platform and pay attention to the synchronization and placidity of the lifting.
- Check whether the oil line is leakage.

**WARNING:**
When beginning load of machine test, no person or other things are allowed to stand or be put near the two sides and beneath the machine.

- Test vehicle whose weight doesn't exceed maximum lift weight.
- Check and ensure no leakage on the oil line. If any abnormal is found, press button "EMERGENCY STOP" to stop it immediately.
- After clearing obstacles, do the test again.

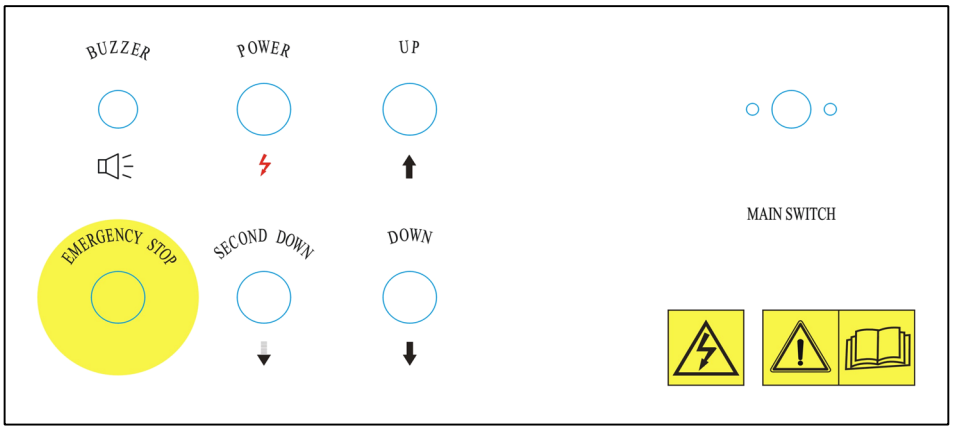
## Operation

**WARNING:** Only skilled and having been trained personnel is allowed to perform the operations.
Check proceedings as following.

**Operation Notices:**

- Clear obstacles around the lift before operation.
- During lifting or lowering, no person is allowed to stand near the two sides and beneath the machine, and no person is allowed on the two platforms.
- Avoid to lifting over weight vehicles.
- When lifting vehicle, the chassis of the vehicle should be filled up with rubber cushion.
- Pay attention to the synchronization of the lifting and lowering. If any abnormal is found, stop the machine timely, check and remove the trouble.
- When the equipment is not used for a long time or over night, the machine should be lowered to the lowest position on ground, and remove vehicle, and cut off power supply.

Instructions on electric operation:




**Lifting:**

- Press "UP" button, the platforms go up. And the platforms will stop lifting when reach the up limit switch.
- Release "UP" button, the oil pump will stop immediately. And the platforms stops lifting.

**Lowering:**

- Press "DOWN" button, the buzzer rings and platforms descend.
- The platforms will stop lowering automatically around 200~300mm height when reach the lower limit switch position. Release "DOWN" button, then press "SECOND DOWN" button to let platforms go down to the lowest position.

**EMERGENCY STOP:**

When the machine has abnormal during car maintenance, press “EMERGENCY STOP” button and lock, to cut off all the operation circuit, so other operation can not be work.

NOT IN-PHASE STOPMACHINE:

When two platforms are not level, according to the following process to adjust the platform level, only after two platforms are at the same height can put them into use.

**Oil make-up adjustment operation (normal service period):**

- After completion of machine installation and adjustment in the application process, the right platform is lower than the left one because of air in the oil cylinder not being excluded completely normal looses or leakage of the hydraulic oil.
- When conducting oil make-up operation, the platforms must not load.
- Adjustment process is as approach ‘5’ and ‘6’ of “Oil make-up adjustment”.

**Emergency Manual Operation for Lowering (Power Failure):**

**WARNING:** When lowering through manual operation, should observe the condition of platform at any time because there is vehicle on the platforms. If there is something abnormal, screw down oil loop valve immediately.

The process of manual operation:

- Switch off the power button “MAIN SWITCH” (avoid abruptly incoming electricity).
- Open the small round cover of control box to find the electromagnetic valve A for lowering.
- Loosen manual oil loop stud at the end of lowering electromagnetic descent valve core and then the platforms begin to descend.
- After the machine has been descended, screw down descent valve’s stud timely.
- The process of manual lowering comes to the end.

## Maintenance and Care

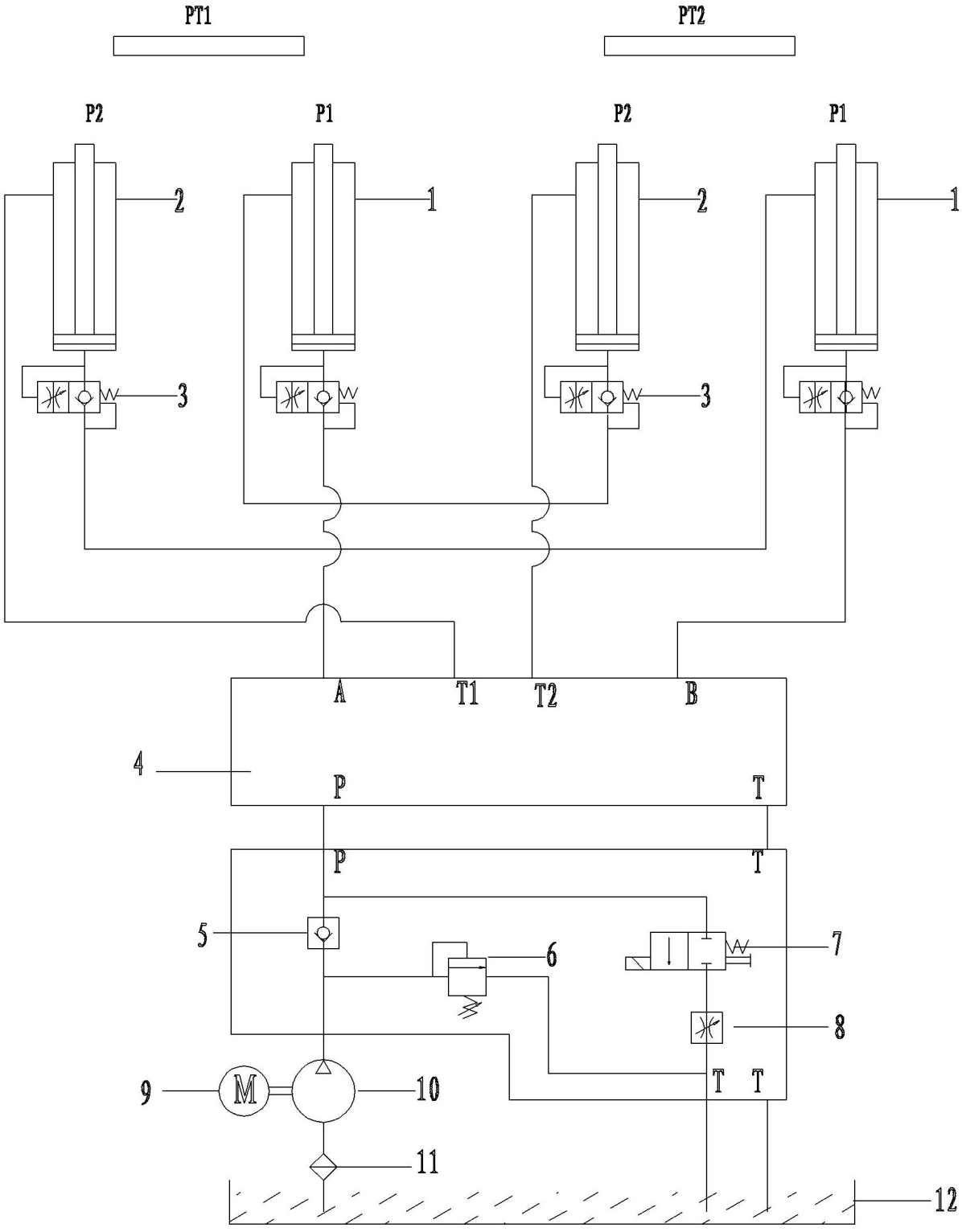
**WARNING:** Skilled personnel only are allowed to perform the operations.

- All bearings and hinges on this machine must be lubricated once a week by using an oilier.
- The upper and lower sliding blocks and other movable parts must be lubricated once a month.
- The hydraulic oil must be replaced one time each year. The oil level should always be kept at upper limit position. The machine should be lower to the lowest position when replace hydraulic oil, then let the old oil out, and should be filtering the hydraulic oil.
- Each team checks the agility and reliability of pneumatic safety equipment.

## Troubleshooting

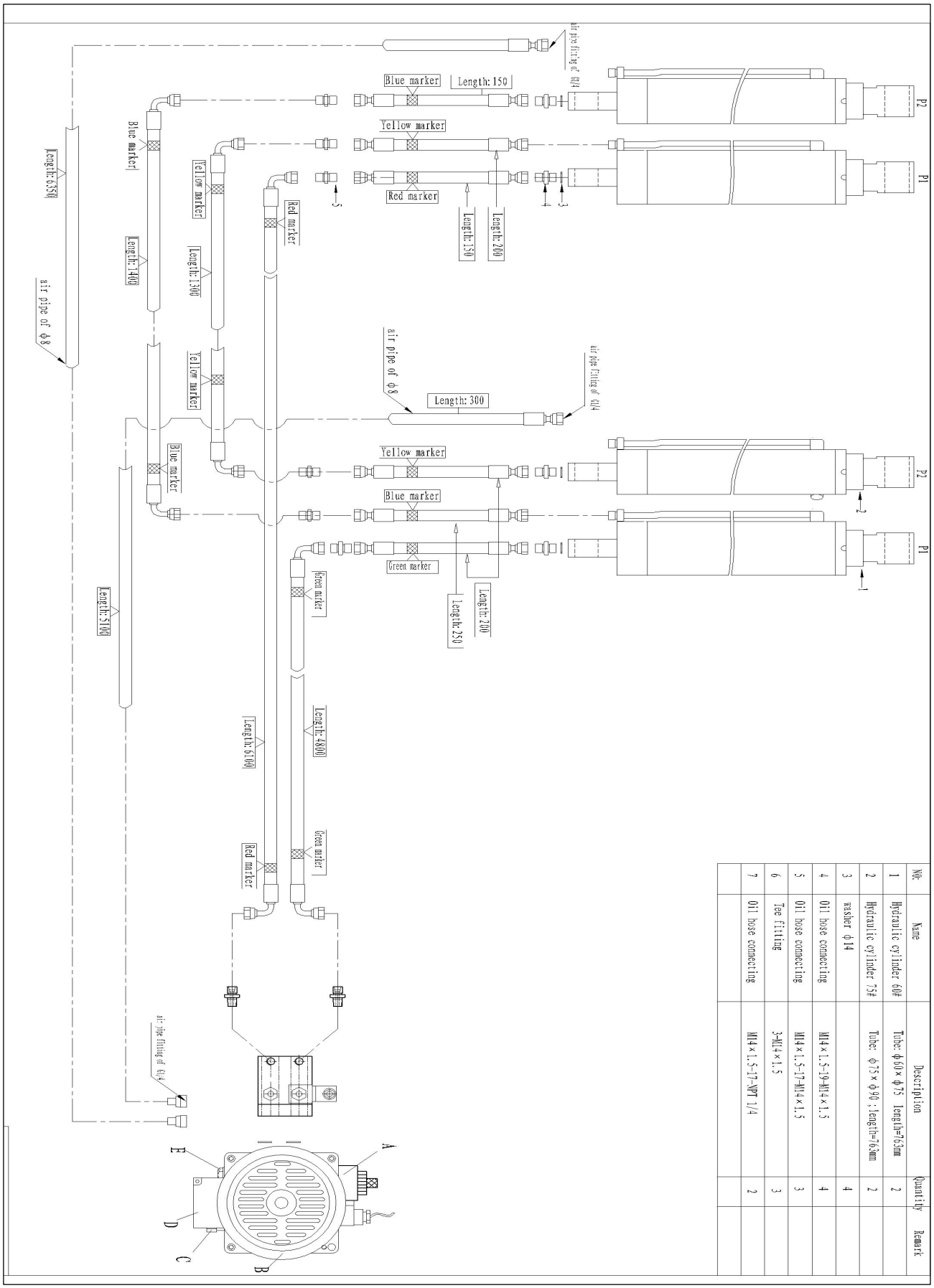
| Symptom | Cause | Troubleshooting |
|---|---|---|
| The motor does not run in lifting operation. | ① Connection of power supply wires is not correct. | Check and correct wire connection |
| | ② The AC contactor in the circuit of the motor does not pick up. | If the motor operates when forcing the contactor down with an isolation rod, check the control circuit. If the voltage at two ends of the contactor coil is normal, replace the contactor. |
| | ③ The limit switch is not closed. | Check the limit switch, wires and adjust or replace the limit switch. |
| In lifting operation, the motor runs, but there is no lifting movement | ① The motor turns reverse. | Change the phases of the power supply wires. |
| | ② Lifting with light load is normal but no lifting with heavy load. | **The set safe pressure of the over-flow valve may be increased by turning the set knob right ward slightly.**<br>**The spool of the lowering solenoid valve is stuck by dirt. Clean the spool.** |
| | ③ The amount of hydraulic oil is not enough. | Add hydraulic oil. |
| | ④ The descent valve is energized but does not work. | Check the plug and coil of the descent valve and check the right turn tightness of its end copper nut and so on. |
| | ⑤The "antiknock valve" is blocked. | Remove the "antiknock valve" from the oil supply hole at the bottom of the oil cylinder, and clean the "antiknock valve". |
| The machine lowers extremely slowly under normal loads. | ①**The hydraulic oil has too high viscosity or frozen, deteriorated (in Winter).** | Replace with hydraulic oil in accordance with the instruction book. |
| | ② The "antiknock valve" for preventing oil pipe burst is blocked. | **Remove the "antiknock valve" from the oil supply hole at the bottom of the oil cylinder, and clean the "antiknock valve".** |
| The right and left platforms are not synchronous and not in the same height. | ① The air in the oil cylinder is not vent completely. | Refer to "Ⅶ. Oil Make-up adjustment Operation". |
| | ② Oil leakage on oil pipe or at its connections. | Tighten oil pipe connections or replace oil seals and then make-up oil and adjust levelness. |
| Noisy lifting and lowering. | ①Lubrication is not enough. | Lubricate all hinges and motion parts (including piston rod) with machine oil |
| | ② The base or the machine is twisted. | Adjust again the levelness of the machine, and fill or pad the base. |

# Hydraulic Schematic Diagram




1、Master cylinder 2、Slave cylinder 3、Antiknock valve 4、Mending balance valve 5、Check valve
6、Overflow valve 7、Desent valve 8、Overflow control valve 9、Gear pump 10、Motor 11、Filter 12、Oil-tank

# Oil Pipe Connection Diagram




| No: | Name | Description | Quantity | Remark |
|---|---|---|---|---|
| 1 | Hydraulic cylinder 60# | Tube: φ60×φ75 length=765mm | 2 | |
| 2 | Hydraulic cylinder 75# | Tube: φ75×φ90 ; length=765mm | 2 | |
| 3 | washer φ14 | | 4 | |
| 4 | Oil hose connecting | M14×1.5-19-M14×1.5 | 4 | |
| 5 | Oil hose connecting | M14×1.5-17-M14×1.5 | 3 | |
| 6 | Tee fitting | 3-M14×1.5 | 3 | |
| 7 | Oil hose connecting | M14×1.5-17-NPT 1/4 | 2 | |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FAX: (08) 9209 3933

SA/NT
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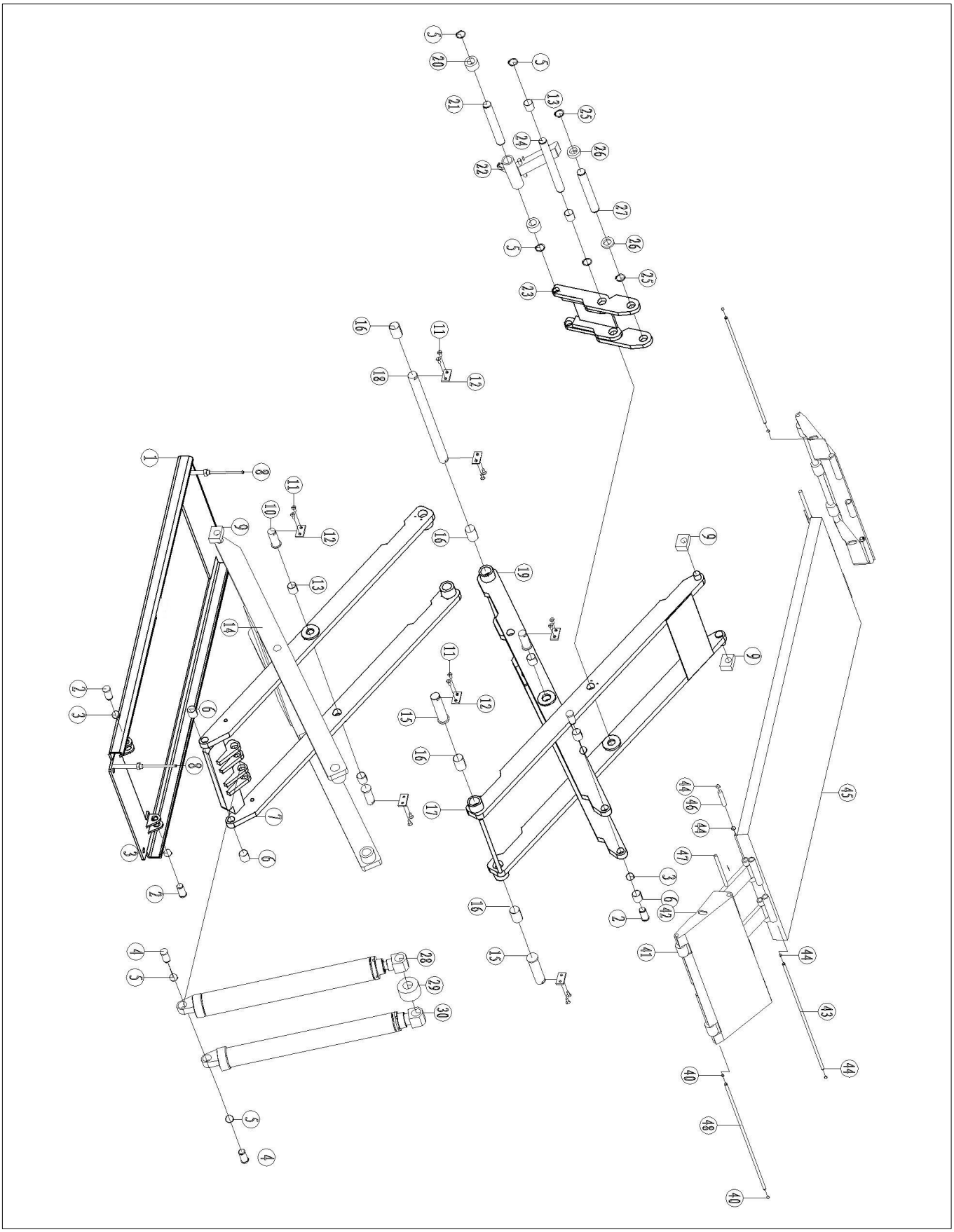
# Exploded Diagram

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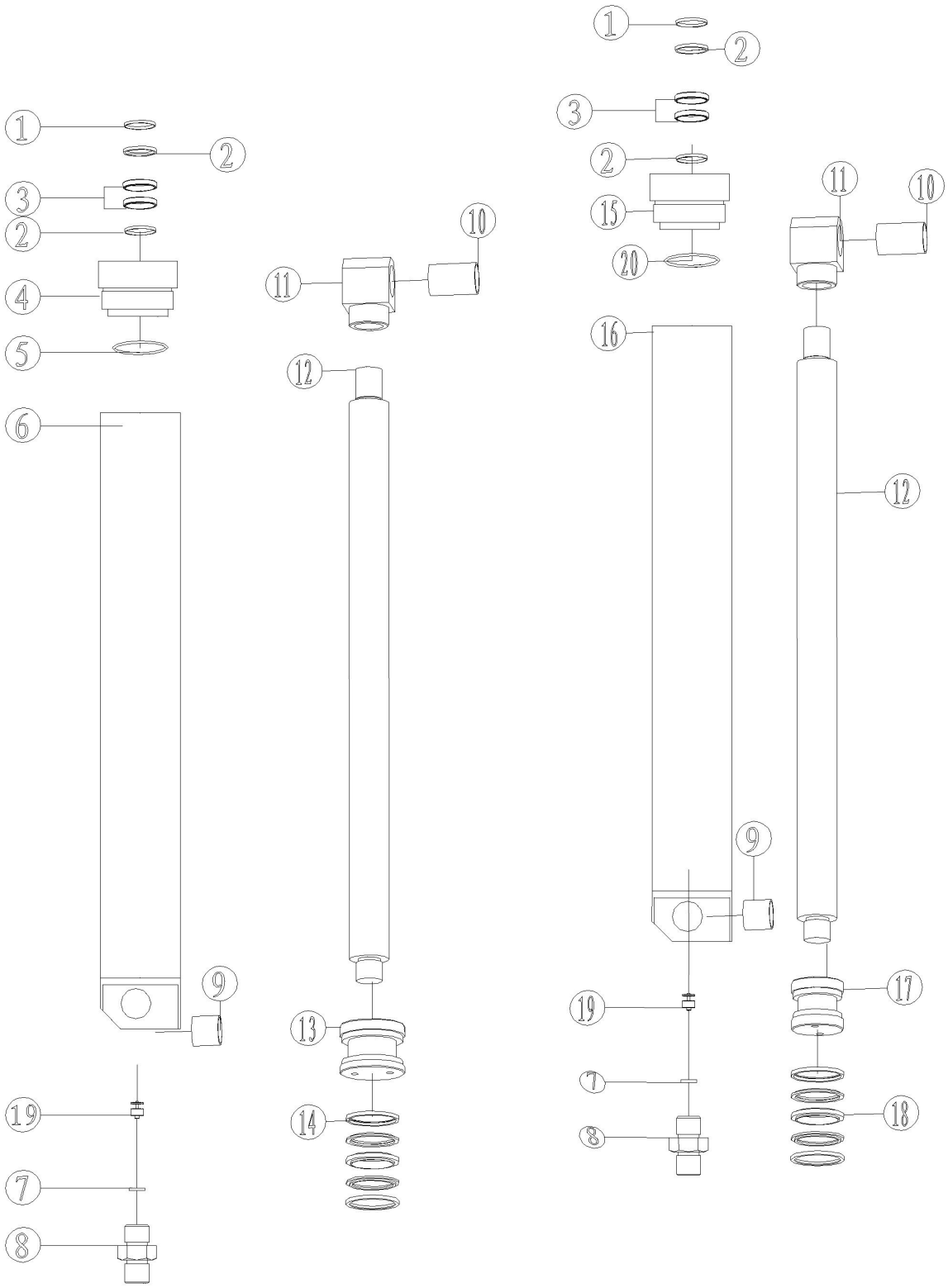


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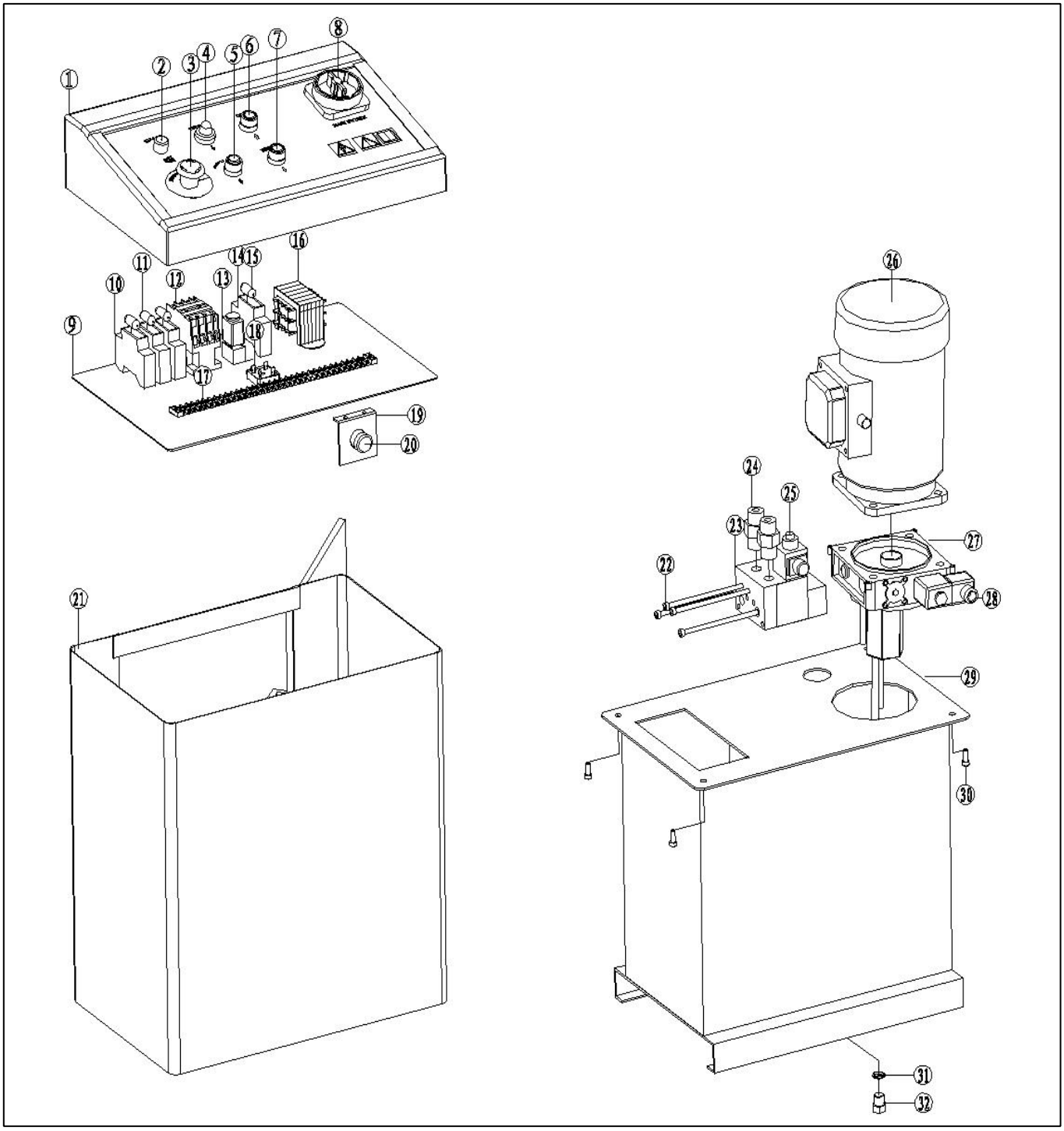
# Control Box Exploded Diagram





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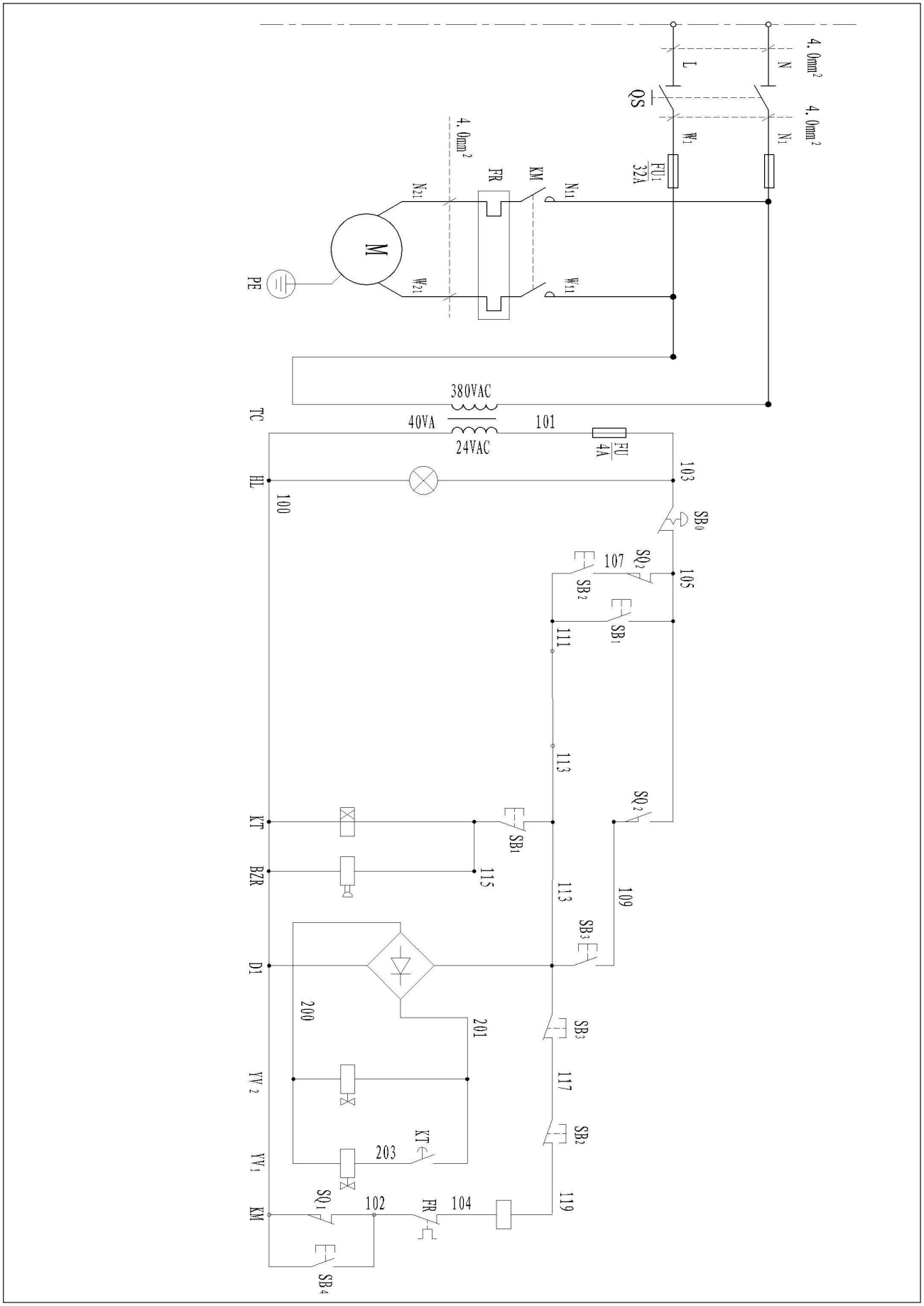
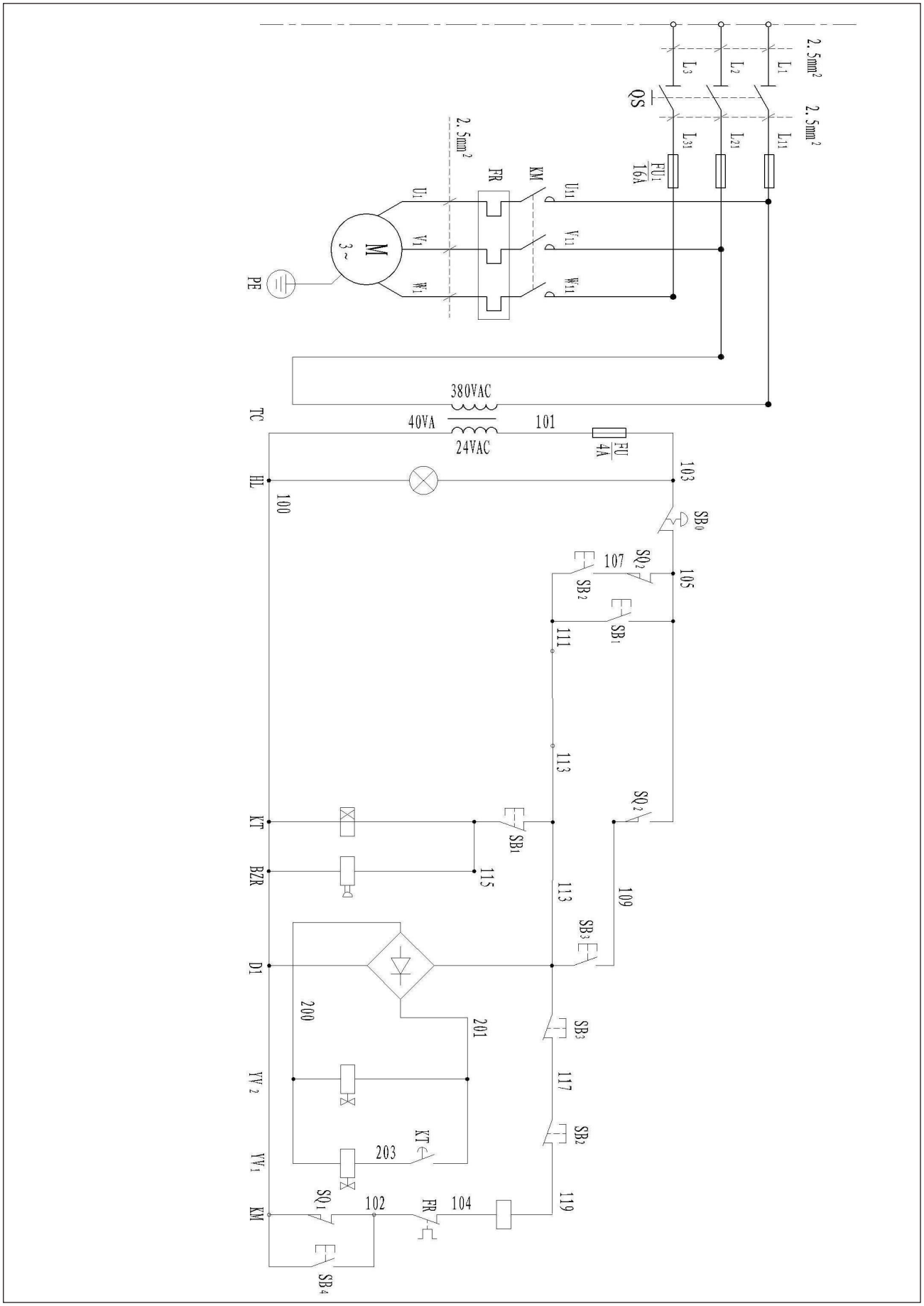
# SLV SSV 220V


4.0mm²
L
N
QS
U1
V1
W1
N1
FU1
32A
4.0mm²
FR
KM
N21
N11
M
PE
W21
W11
380VAC
40VA
24VAC
101
FU
4A
TC
HL
100
103
SB0
107
SQ2
SB2
105
SB1
111
113
KT
BZR
115
109
SB3
D1
200
201
YV2
117
YV1
203
KT
SQ1
102
FR
104
119
KM
SB4

# SLV SSV 380V





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